

REMARKS

In the Office Action, claims 1 - 63 were noted as pending in the application, and all claims were rejected. By this amendment, claims 25, 38, and 39 have been canceled, and claims 1, 26, 27, 29, and 32 have been amended. Thus, claims 1 - 24, 26 - 37, and 40 - 63 are pending in the application. The rejections of the Office Action are traversed below.

Rejection of Claims 1 - 31 and 60 - 63 under 35 USC §101

In item 3, on pages 2 and 3 of the Office Action, claims 1 - 31 and 60 - 63 were rejected under 35 USC §101. As a preliminary note, Applicants thank the Examiner for finding the invention as recited in claims 1 - 31 and 60 - 63 produces a useful, concrete, and tangible result; and the Applicants further thank the Examiner for taking time on August 30, 2004 to briefly discuss considerations regarding computer-implemented applications.

Claim 1, from which claims 2 - 31 and 60 - 63 depend, has been amended herein to recite “A computer-implemented method for enhancing performance of a project, . . .” Support for the amendment can be found in the specification at least at page 8, lines 14 - 18; page 13, line 9 - page 14, line 4; and page 16, lines 12 - 15. The computer is integral to the recited method for enhancing performance of a project. In particular, project information is input to a central computer and can include transmission of the information across a network (page 13, lines 9 - 16); enhancement solutions are selected by a computer based on the input project information (page 14, lines 1 - 2; page 16, lines 13 - 14); and the input project information is modified by the computer to incorporate the enhancement solutions (page 14, line 3; page 16, line 15). The Applicants respectfully submit that the application, as both disclosing and reciting the methodology as performed on a computer, is within the technological arts as required by the rules of the U.S. Patent and Trademark Office, including the requirements specified in *In re Bowman*, 61 USPQ2d 1669, 1671 (Bd of Pat Appeals and Intf 2001). Withdrawal of this rejection is respectfully requested.

Rejection of Claims 32 - 59 under 35 USC §112

In item 5, on page 3 of the Office Action, claims 32 - 59 were rejected under 35 USC §112, second paragraph, as being indefinite. In particular, the Office Action asserts that it is not clear whether the “reviewer” of independent claim 32 is a piece of software implemented by a computer or an actual human being. Claim 32 has been amended herein to expressly

recite the reviewer is a reviewer computer. Support for the amendment can be found in the specification at least at page 16, lines 11 - 15. Withdrawal of the rejection is respectfully requested.

Rejection of Claims 1 - 13, 25 - 27, 60, and 63 under 35 USC §102

In item 7, on pages 4 - 7 of the Office Action, claims 1 - 13, 25 - 27, 60, and 63 were rejected under 35 USC §102 as being anticipated by Higgins, "Don't Just Sit There" (Feb, 1999) and Gornick, "The Quest for Quiet" (Dec, 1997). This rejection is respectfully traversed. As a threshold matter, the Applicants respectfully note that claim 25 has been canceled herein, thereby rendering the rejection of claim 25 moot.

The Claimed Invention

Exemplary embodiments of the Applicants' invention are directed to a computer-implemented system and method for enhancing the performance of a project, wherein the project includes construction or modification of a structure. A desired level of performance, such as a certain level of sound control performance as represented by a field sound transmission class or coefficient (FSTC) level, is input to the system along with other project information such as the building plans, building specifications, and materials lists. Based on the input project information and the input desired level of acoustical performance, a computer selects acoustical enhancement solutions and modifies the inputted project information to incorporate the selected enhancement solutions, thereby achieving the desired acoustical performance level for the project.

The Higgins Reference

Higgins is a 1999 article discussing the development of office furniture and electronic equipment for the new millennium. A portion of the article on its third page discusses how the acoustical testing services offered at Johns Manville's Denver, Colorado testing laboratory has resulted in lower-cost office panels without sacrificing structure (Higgins at ¶¶ 23, 26). Office panel manufacturers, including Herman Miller, bring their panels to the laboratory, where they are tested for sound transmission coefficients and noise reduction coefficients (¶¶ 23 - 25). A focus of the testing is how to eliminate some of the structural members of the panels, thereby reducing their cost, without giving up acoustics or structural

requirements (§§ 23, 26). Based on the tests, Herman Miller redesigned the panels, thereby reducing their cost (§§ 27, 28).

The Gornick Reference

Gornick is a 1997 article discussing Johns Manville's Littleton, Colorado acoustical testing laboratory, which is noted as being recently expanded to now be able to test sound power output of appliances and to be able to conduct three-dimensional sound intensity testing (Gornick at §§ 41, 42). The laboratory includes facilities to test the components of appliances, including furnaces (§§ 45, 46). In this manner, the engineers can listen to the furnace in actual operation and then evaluate ways to reduce the sound level (§ 46).

The Claimed Invention is Patentably Distinguishable Over the Cited Documents

The Applicants' claimed invention is directed toward a computer-implemented method for enhancing the performance of a project, including enhancing the acoustical performance of the project, such as a building structure. In particular, and reciting relevant portions of independent claim 1, exemplary embodiments of the Applicants' method for enhancing the performance of a project include:

- inputting project information, including a desired performance level;
- selecting, by a computer, enhancement solutions based on the project information;
- and
- modifying the inputted project information to incorporate the selected enhancement solutions.

The Office Action cites to the Higgins article as disclosing each of these features. The Applicants respectfully assert that the Office Action's reliance on Higgins is misplaced because Higgins fails to teach all of the features recited in independent claim 1. The inventive method begins with the inputting of project information, with project information including, for example, building plans, project specifications, and materials lists. Importantly, the input information also includes a performance level that is desired for the project to achieve. In some embodiments of the application, the desired performance level is a particular field sound transmission class or coefficient. The Office Action cites to Higgins at § 24 and 26 as disclosing this feature. However, a close reading of Higgins shows that

there was no predetermined cost or acoustical performance level established for the office panels to achieve as a result of the testing. In fact, Higgins is completely silent regarding the threshold step of inputting project information. In Higgins, Herman Miller merely wanted to generally “improve the value of its free-standing panels” and did so by first testing the performance of the panels (¶¶ 24, 25). In contrast, the present claimed invention starts with a specific performance level and automatically modifies the input project information with selected enhancement solutions to meet the input, predetermined performance level of the entire project, such as a building. Also, Higgins is limited to a laboratory environment where individual components, such as office panels and furnace motors, not an entire project as claimed herein, are tested for their acoustical performance.

Claim 1 further recites that, based on the input project information, including the desired level of acoustical performance, a computer selects enhancement solutions and modifies the inputted project information to incorporate the selected enhancement solutions, thereby achieving the desired acoustical performance level for the project. In contrast, the result of the testing in Higgins, after six months time and a redesign of the panel by Herman Miller and not Johns Manville, is an office panel with less steel and more hardboard, thereby reducing its cost (¶¶ 27, 28). A close reading of Higgins shows that the result of the testing process was a reduction in the cost of the office panel without negatively impacting the acoustical performance of the office panel (see ¶¶ 24, 26).

No input project information is identified in Higgins; and, accordingly, Higgins also fails to disclose any input project information being modified to incorporate the selected enhancement solutions. This feature of amended claim 1 was formerly recited in dependent claim 25. The Office Action cited to ¶¶ 26 - 28 of Higgins as allegedly disclosing this feature. However, Higgins discloses a six month redesign process undertaken by Herman Miller before any improvement could be realized. If the Johns Manville testing services discussed in the Higgins article fully anticipated the invention recited in claim 1, then the testing services would directly modify the input project information to incorporate selected enhancement solutions -- not revert to a six-month redesign effort by Herman Miller personnel.

It is respectfully submitted that the Higgins article fails to disclose each of the features recited in independent claim 1; and, therefore, Higgins cannot reasonably be said to anticipate Applicants' claimed invention. Accordingly, claim 1 is believed to be patentably

distinguishable over the Higgins document, and it is respectfully requested that the rejection of claim 1 be withdrawn.

Claims 2 - 13, 26 - 27, 60, and 63 depend from claim 1 and include all the features of claim 1 plus additional features which are not taught or suggested by the Higgins or Gornick documents. For example, claims 2, 3, and 5 specify that the project information includes building plans for a structure; information on the uses of rooms within the structure; and information on the areas within the structure, wherein the desired performance level is a performance of noise reduction between the areas, which is neither taught nor suggested by Higgins or Gornick. The Office Action cites to Higgins at ¶¶ 23 - 28 as allegedly disclosing these features. However, contrary to the assertions of the Office Action, Higgins is completely silent regarding any building plans for a structure or the uses of rooms within a structure. Whether Herman Miller's office panels can be used in a building's rooms, as asserted in the Office Action, is not a substitute for the failure of the Higgins article to disclose project information that includes the uses of rooms within a building structure. Higgins is clearly limited to the testing of office panels and is silent regarding the uses of rooms of a building structure as input project information.

The Office Action further cites to the combination of Higgins at ¶¶ 24, 25, and 28 and Gornick at ¶41 as disclosing the features recited in claim 5 that the desired performance level is a performance of noise reduction between the areas within a structure. First, under 35 USC §102, a single reference must teach all the recited features of a claim in order to reject the claim as being fully anticipated by the reference under 35 USC § 102. Accordingly, for at least this reason, the Applicants respectfully assert the rejection of claim 5 under the combination of the Higgins and Gornick articles is invalid and should be withdrawn. Second, neither Higgins nor Gornick disclose the desired performance level is a performance of noise reduction between the areas. As discussed above, the only performance level Higgins is concerned with improving is the cost of the office panels. Gornick discloses sound testing of appliances and furnaces, including motors and blowers (Gornick at ¶¶ 41, 44, and 45), with no mention of noise reduction between areas within a structure. Therefore, for at least this reason and the reasons set forth above with respect to claim 1, it is submitted that claims 2 - 13, 26 - 27, 60, and 63 patentably distinguish over the Higgins or Gornick documents. Withdrawal of the rejection of claims 2 - 13, 26 - 27, 60, and 63 is respectfully requested.

Rejection of Claims 1 - 13, 25 - 27, 60, and 63 under 35 USC §102

In item 8, on pages 7 - 9 of the Office Action, claims 1 - 13, 25 - 27, 60, and 63 were rejected under 35 USC §102 based upon a public use or sale of the invention, as indicated by Higgins and Gornick. This rejection is respectfully traversed.

As a threshold matter, and as discussed above, the Applicants respectfully note that claim 25 has been canceled herein, thereby rendering the rejection of claim 25 moot. Further, as discussed above regarding claim 5, under 35 USC §102, a single reference must teach all the features of the rejected claim for the claim to be validly anticipated by the reference. The present item of the Office Action purports to reject claims 1 - 13, 26 - 27, 60, and 63 under the combination of the Higgins and Gornick articles. Accordingly, the Applicants respectfully assert the rejections of claims 1 - 13, 26 - 27, 60, and 63 under 35 USC §102 in view of the combination of Higgins and Gornick is invalid and further request, for this reason, the rejection of these claims be withdrawn.

The Claimed Invention Was Not Subject to a Prior Public Use or Sale Under 35 USC §102(b)

As regards the asserted public sale of the claimed invention as evidenced by the disclosure of the Higgins and the Gornick articles, the Applicants incorporate the comments presented above regarding the rejection of these claims as allegedly anticipated by the Higgins and Gornick articles. In short, the Applicants assert that Higgins and Gornick, whether singly or in combination, fail to teach each of the features recited in claims 1 - 13, 26 - 27, 60, and 63; and, accordingly, the Higgins and Gornick articles about Johns Manville's testing laboratory fail to evidence the sale of the invention as recited in claims 1 - 13, 26 - 27, 60, and 63.

However, in accordance with the Examiner's request, the Applicants are filing herewith an IDS of four references that disclose various sound control testing methods. Three of the references were published by Johns Manville, the assignee of the present application, with publication dates of July, 1997 and May, 2000. The reference entitled "Your Partners in Problem Solving" does not appear to have a publication date; however, the Applicants will provide the publication date to the Examiner should they learn of it. The Applicants respectfully assert that none of these references, including the reference published by NAIMA, whether taken singly or in any combination, disclose the features recited in

claims 1 - 13, 26 - 27, 60, and 63. In particular, none of the references disclose starting with a desired performance level of a project, with a computer-implemented system for selecting project enhancement solutions based on input project information and automatically modifying the input project information to incorporate the selected solutions to meet the predetermined performance level. Instead, the references disclose a traditional testing regime whereby noise problems are first identified, and then solutions are proposed to reduce the noise. See, for example, the “Sound Advice” reference at page 3; “The Basics of Sound Control” at pages 5 - 6; “Your Partners in Problem Solving” at pages 1 and 4; and “Sound Control for Commercial and Residential Buildings” at pages 1 - 4.

Based on the above reasons, the Applicants respectfully assert that the testing services offered by Johns Manville prior to November 13, 1999 fail to disclose or incorporate the invention as recited in claims 1 - 13, 26 - 27, 60, and 63. Accordingly withdrawal of the rejection of claims 1 - 13, 26 - 27, 60, and 63 under the prior sale prohibition under 35 USC §102(b) is respectfully requested.

Rejection of Claims 14 - 24, 28 - 59, 61, and 62 under 35 USC §103

In item 11, on pages 9 - 18 of the Office Action, claims 14 - 24, 28 - 59, 61, and 62 were rejected under 35 USC §103 as being unpatentable over Johns Manville’s acoustical testing services, as disclosed in Higgins and Gornick. This rejection is respectfully traversed. As a threshold matter, the Applicants note that claims 38 and 39 have been canceled herein, thereby rendering the rejection of these claims moot.

The Claimed Invention is Patentably Distinguishable Over the Cited Documents

The Applicants' claimed invention is directed toward a computer-implemented system for enhancing the performance of a project, including enhancing the acoustical performance of the project, such as a building structure. In particular, and reciting relevant portions of independent claim 32, exemplary embodiments of Applicants’ system for enhancing the performance of a project include:

- a central computer for receiving project information;
- a control center containing a plurality of enhancement solutions; and
- a reviewer for determining a combination of enhancement solutions based on the received project information, wherein the reviewer is a reviewing computer.

The Office Action asserts that the Higgins and Gornick articles disclose various types of acoustical testing to make recommendations regarding insulation improvements. However, as asserted by the Applicants above regarding claims 1 - 13, 26 - 27, 60, and 63, the Office Action admits in item 11 that Higgins and Gornick fail to teach any of the features recited in claims 14 - 24, 28 - 37, 40 - 49, 52 - 59, 61, and 62, some of which are system forms of claims 1 - 13, 26 - 27, 60, and 63. Instead, the Office Action rejects each of claims 14 - 24, 28 - 32, 34 - 37, 40, 41, 43, 61, and 62 under the assertion that each of the features recited in these claims is well-known. The Applicants respectfully traverse the position that the features recited in claims 14 - 24, 28 - 32, 34 - 37, 40, 41, 43, 61, and 62 are well-known and request the Examiner provide a reference that teaches each of the features recited in the claims, in accordance with MPEP §2144.03.

The Applicants respectfully note the Office Action has relied on articles by Higgins and Gornick to reject claims 33, 42, 44 - 49, and 52 - 59 under 35 U.S.C. §103, but has presented no analysis regarding where each of these documents discloses the features recited these claims, contrary to the requirements of 37 CFR §1.104(c) and MPEP §706. In fact, the Office Action fails to address any of these claims in its rejection under 35 USC §103. The Office Action does assert, without explanation or citation, on page 15 that claims 32 - 59 recite limitations already addressed by the rejection of claims 1 - 31 and 60 - 63 above and that, therefore, the same rejection applies to these claims. However, the Office Action fails to assert any alleged mapping between the 28 claims of claims 32 - 59 and the 35 claims of claims 1 - 31 & 60 - 63. Accordingly, the Applicants are not aware of the particular parts of Higgins and Gornick, if any, the Office Action is relying on for the rejection of claims 32 - 59; and, therefore, the Applicants are unable to specifically respond as to why the rejection of claims 32 - 59 may not be proper.

Finally, the Applicants note that only the rejection of claims 50 and 51 include a citation in the Office Action to one of the Higgins and Gornick references where the claimed features are allegedly disclosed. However, claims 50 and 51 recite that at least one of the enhancement solutions includes information on a sound absorbing material or a sound blocking material. Higgins and Gornick are completely silent regarding any such information. While Higgins discloses Johns Manville being a provider of fiberglass insulation at ¶ 23 and discloses hardboard panels and steel being structural materials at ¶¶ 26,

27, this reference is completely silent regarding any information on a sound absorbing material or a sound blocking material; nor does Higgins disclose information on these materials comprising an enhancement solution, as recited in claims 50 and 51, as depending from claim 49.

While teachings of several documents may be combined to render a claimed invention obvious, there must be a motivation or suggestion in the documents relied upon to make the specific combination. The Applicants respectfully assert that no suggestion or motivation has been cited for making the combination of Higgins and Gornick as suggested in the Office Action to allegedly render obvious the features recited in claims 14 - 24, 28 - 37, 40 - 59, 61, and 62.


For the reasons discussed above, claims 14 - 24, 28 - 37, 40 - 59, 61, and 62 are believed to be patentably distinguishable over Higgins and Gornick, whether taken alone or in combination. Accordingly, it is respectfully requested that the rejection of claims 14 - 24, 28 - 37, 40 - 59, 61, and 62 be withdrawn.

Summary

It is submitted that none of the documents, either taken alone or in combination, teach the claimed invention. Thus, claims 1 - 24, 26 - 37, and 40 - 63 are deemed to be in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited. If any fees are required in connection with this Amendment, please charge the same to our Deposit Account No. 02-4800.

Respectfully submitted,

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